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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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27386	7590	10/24/2006		
NORRIS, MCLAUGHLIN & MARCUS, P.A. 875 THIRD AVE 18TH FLOOR NEW YORK, NY 10022				
			EXAMINER	
			WYROZEBSKI LEE, KATARZYNA I	
			ART UNIT	PAPER NUMBER
			1714	
DATE MAILED: 10/24/2006				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/796,231

Applicant(s)

HUSEMANN ET AL.

Examiner

Katarzyna Wyrozebski

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-32 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|-------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>5/28/04, 8/16/04</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Specification

1. The abstract of the disclosure is objected to because it is not in form of one paragraph. Correction is required. See MPEP § 608.01(b). Applicants are required to provide abstract on separate sheet of paper that is written in one paragraph.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 7-12, 18, 23, 30 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Use of term “substituted” alone renders claim indefinite since it is not clear as to what exactly are the substituents.

Use of term “derivative” alone renders claim indefinite since it is not clear as to what exactly is the form of the derivative.

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Norrish I and Norrish II photoinitiators are not compounds and do not define the specific photoinitiators utilized in the disclosure.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1-4, 6-8, 10-13, 18-27, 31, 32 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by PARSONS (US 5,851,663).

The prior art of PARSON discloses flame retardant pressure sensitive composition and tape comprising the adhesive. Composition comprising rubber resin, acrylic resin and non-halogenated flame retardant. Substrates are both woven and non-woven.

Preferred flame retardant is ammonium polyphosphate. Other flame retardants can be utilized therewith. Flame retardants are utilized in amount of 25-75 pbw of the adhesive (col. 2-

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3). Flame retardants are added to the adhesive composition using conventional methods such as ball milling.

Rubber resin comprises rubber such as natural rubber, BR, SBR, and PIB. Tackifying agents are also utilized and such include hydrogenated resin such as glyceryl esters, terpene resins, petroleum resins, cumarone-indine resin, phenolic resin, butene resin, silicon resins and the like (col. 4). Rubber and tackifying resins can be utilized in amount of 40-150 pbw per 100 parts of acrylic.

Acrylic component comprises copolymer or mixture of monomers having acrylic functionality. The monomers include acrylic acid, methacrylic acid, isooctylacrylate, acrylamide, methacrylamide, acrylonitrile, methacrylonitrile, methylasiamyl acrylate, 2-ethylhexa acrylate, and butylacrylate.

The adhesive composition can be applied onto a substrate utilizing conventional methods such as knife coating, rolling, extrusion, dipping and the like. The composition can be applied with solvent or 100 % solid.

6. Claims 1-15, 17, 19, 21-29 are rejected under 35 U.S.C. 102(a or e) as being anticipated by SAKURAI (US 6,893,583 or US 2002/0193487).

SAKURAI discloses composition for flame retardant adhesive comprising flamer retardant, photoinitiator, monomers and additional resin.

Preferred flame retardant of SAKURAI is ammonium polyphosphate. Ammonium polyphosphate flame retardant can also be encapsulated in polymeric component. Ammonium polyphosphate is utilized in the amount of 25-75 pbw (claims).

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Acrylic polymer of SAKURAI is made from more than one acrylic monomer. Vinyl monomer 1) comprises one or mixture of the following: phenoxyethyl acrylate, phenoxydiethylene glycol acrylate, methoxyethyl acrylate, tripropylene glycol acrylate, isooctyl acrylate, 2-ethyle, hexyl methacrylate. Second monomer 5) is selected from the following: isobutyl acrylate, t-butyl acrylate, cyclohexyl acrylate, glycidyl methacrylate, trimethylolpropane triacrylate, ethylmethacrylate, methacrylic acid, 2-hydroxyethylmethacrylate and the like. Additional polymerizable vinyl monomers include: vinyl ether, divinyl ether, divinyl benzene, vinyl acetate, vinyl propionate, styrene, vinyl styrene, and vinyl pyrrolidone. Initiators include peroxides such as cumene hydrogen peroxide, benzoyl peroxide, t-butyl peroxybenzoate, MEK peroxide and the like. Although the molecular weight of the polymeric composition of the prior art is not disclosed it view of the components utilized in the composition it will overlap with the molecular weight required by the present invention. Components of the composition encompass the components of the present invention in amounts and types, the monomers are varied to provide proper tack to the polymer.

Rubber component of the SAKURAI is selected from acrylic based rubbers as well as diene rubbers, natural rubber and the like (col. 5). Rubber component is utilized in the amount of 5-50 pbw (col. 6).

In the light of the above disclosure the prior art of SAKURAI anticipates claims rejected above.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

9. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

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10. Claims 1-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over PARSONS (US 5,851,663) or SAKURAI (US 6,893,583 or US 2002/0193487) either one of which in view of NISHIMURA (US 2005/0227065).

The discussions of the disclosures of PARSONS or SAKURAI from paragraphs 5 or 6 of this office action are incorporated here by reference.

The difference between the present invention and the disclosure of PARSONS or SAKURAI is use of other monomers of acrylates as well as photoinitiators as well as specific molecular weight of the acrylic polymer.

With respect to the above difference, the prior art of NISHIMURA discloses flame retardant pressure sensitive adhesive comprising ammonium polyphosphate as flame retardant. The composition comprises mixture of two acrylic polymers. Epoxy polymer can also be utilized.

Monomers for the acrylic polymer include monomers required by the present claims including those being capable of photoinitiation. Photoinitiators of NISHIMURA are listed in [0049] and encompass the requirements of present invention.

Resulting polymer has molecular weight of 200,000 to 3,000,000. Above 3,000,000 the polymer will lose its ability to act in pressure sensitive adhesive capacity. The adhesive composition is deposited on PET film using conventional methods and it is tested.

Addition of monomers and photoinitiators to facilitate curing results in adhesive that has higher performance, higher flame retardancy, adhesiveness and reliability.

In the light of the above disclosure, it would have been obvious to one having ordinary skill in the art at the time of the instant invention to utilize the teachings of NISHIMURA in


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either PARSONS or SAKURAI and thereby obtain the claimed invention. Such combination of disclosures would still afford acrylate based pressure sensitive adhesive.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Katarzyna Wyrozebski whose telephone number is (571) 272-1127. The examiner can normally be reached on Mon-Thurs 6:30 AM-4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on (571) 272-1119. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


Katarzyna Wyrozebski
Primary Examiner
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